

Community Health Needs Assessment:

Health and Behavioral Health Needs

Tom Green County, Texas

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December 31, 2015

This report is part of a comprehensive project to assess the Health and Behavioral Health Needs of the Extremely Poor in a 20-county region of West Texas. The regional assessment includes Coke, Concho, Crockett, Edwards, Irion, Kimble, Kinney, Mason, McCulloch, Menard, Mills, Reagan, Runnels, San Saba, Schleicher, Sterling, Sutton, Tom Green, Upton and Val Verde counties. The set of project documents includes a report for each county, plus a regional-level assessment.



Tom Green County Courthouse - San Angelo, Texas

Methodist Healthcare Ministries of South Texas and the San Angelo Health Foundation provided support for this Community Health Needs Assessment for the people of Tom Green County.

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PREFACE

Community Development Initiatives at Angelo State University prepared this Community Health Needs Assessment for the people of Tom Green County, Texas. The assessment is the product of collaboration among Community Development Initiatives, the Concho Valley Community Action Agency, and many community champions and stakeholders of the twenty counties in the comprehensive study of the Health and Behavioral Health Needs of the Extremely Poor in West Texas.

Community Development Initiatives is based on a belief that flourishing communities thrive on trust between individuals, organizations, and institutions. Its mission is to link Angelo State University to West Texas communities through innovative community-based research in support of their development.

The Concho Valley Community Action Agency is a 501(c)3 nonprofit corporation founded in 1966 in response to War on Poverty legislation. Although programs and services have changed over the years, the purpose of fighting the causes of poverty in the Concho Valley has remained constant. The Agency's vision is a community free of barriers to self-sufficiency.

The purpose of the comprehensive study is to identify and prioritize health and behavioral health needs of the approximately 14,743 extremely poor individuals living in a twenty-county region studied by the project. The Tom Green County Community Health Needs Assessment is a vital part of the regional project.

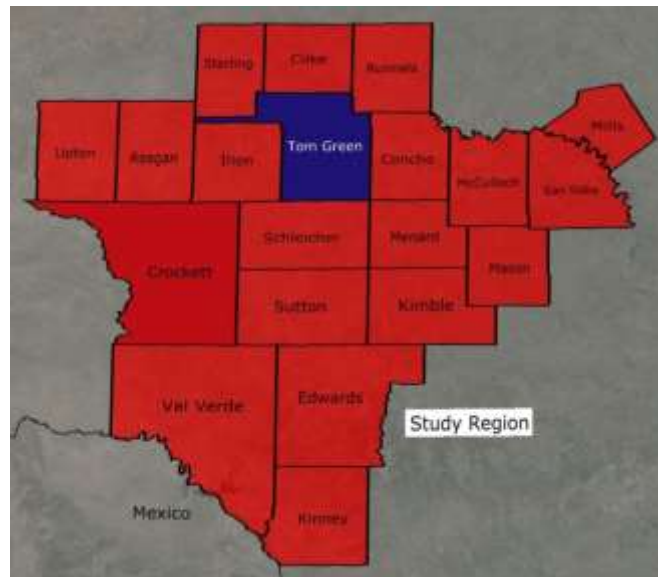
The research to assess the Health and Behavioral Health Needs of the Extremely Poor in West Texas was guided by a six-member advisory group including:

- Mark Bethune, Concho Valley Community Action Agency
- Tim Davenport-Herbst, St. Paul Presbyterian Church of San Angelo
- Dusty McCoy, West Texas Counseling & Guidance
- Susan McLane, Concho Valley Community Action Agency
- Sue Mims, West Texas Opportunities & Solutions
- Kenneth L. Stewart, Community Development Initiatives

The generous support of Methodist Healthcare Ministries of South Texas and the San Angelo Health Foundation made the comprehensive regional project and this Community Health Needs Assessment for the people of Tom Green County possible.

INTRODUCTION

The project to assess Health and Behavioral Health Needs in West Texas employs a collaborative community-based research approach to evaluate the health status and situation of vulnerable population groups in the study region. By definition, vulnerable populations are the most underserved by the health care system. They include individuals with the least education, low-income households, and members of racial or ethnic minority groups. People in Tom Green County living in severe poverty are an important segment of the vulnerable population in health care. The assessment includes the following:



1. A demographic profile featuring the vulnerable groups in the population. The profile integrates publicly available secondary demographic data.
2. A health status profile of community health and mental health care resources, utilization patterns, and morbidity and mortality rates.
3. Results of a survey of poor and extremely poor residents of selected counties in the northern part of the study region.
4. Identification and prioritization of health and behavioral health issues in Tom Green County based on the prevalence, consequences, and impact of risk factors on health inequities, and the feasibility of communities acting toward solutions.

GENERAL DESCRIPTION OF THE TOM GREEN COUNTY COMMUNITY

Tom Green County is a 1,522 square mile land area situated on the northern edge of the Edwards Plateau in West Texas. As Anglo-American settlement developed after the Civil War, the county was created from the Bexar District in 1874. It is named for Confederate Brigadier General Tom Green. The city of San Angelo, Texas is the county seat.



San Angelo is 220 miles northwest of San Antonio on U.S. highways 87, 67, and 277, and also at the confluence of the North, South, and Middle Concho rivers. Surrounded by farms on the east and ranches on the west, the economy became more diversified than that of many West Texas frontier settlements.

Although agriculture, ranching, and a later-developing oil and gas industry are significant to the economy, San Angelo and Tom Green County have developed one of the more diverse economic bases in the study region with manufacturing companies producing a variety of products including surgical sutures, iron and steel, electronics, and energy equipment. San Angelo has also become a highly rated medical hub in West Texas. Still, the Texas Workforce Commission rates the county as only average among Texas counties in its level of economic diversity.¹

Table 1 reports private industry and employment for Tom Green County in 2013. More than 2,660 private industry establishments employed about 36,644 county residents at an average pay rate of \$36,118. Private industry employees comprised approximately 64 percent of the county's 57,659 person labor force in 2013.²

Diversity of the Tom Green County economy is evident from the industry and employment picture (Table 1). In 2013, three North American Industry Classification System (NAICS) sectors (NAICS codes 62, 44, 72) employed workers comprising more than 10 percent of the county's private industry employees. That NAICS code 62 establishments employed 21 percent of private industry workers demonstrates the importance of the health care sector, making health and

¹ County Narrative Profiles, Texas Workforce Solutions, retrieved September 3, 2015: <http://socrates.cdr.state.tx.us/CNP/index.asp>.

² The estimate of 57,659 labor force participants is from the US Census Bureau's 2013 American Community Survey, retrieved July 23, 2015: <http://factfinder.census.gov>.

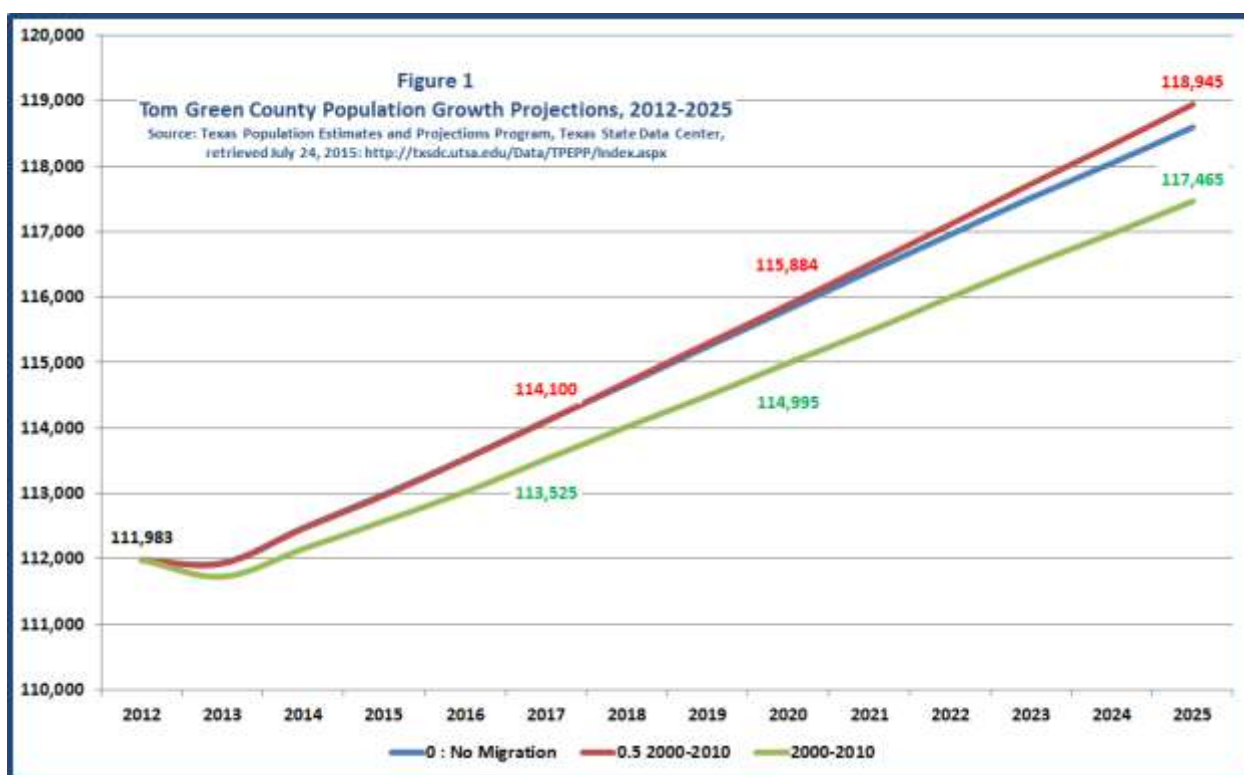
social assistance establishments the county's largest private employers. However, no single sector dominates the employment picture in Tom Green County.³

Table 1 Tom Green County Private Industry & Employment, 2013				
North American Industry Classification System (NAICS) Sectors	Annual Average Establishment Count	Annual Average Employment	Percent Total Employment	Average Annual Pay
All private industries	2,663	36,644	100	\$36,118
NAICS 62: Health care and social assistance	239	7,820	21	\$41,208
NAICS 44-45: Retail trade	390	5,697	16	\$27,181
NAICS 72: Accommodation and food services	211	4,957	14	\$15,130
NAICS 31-33: Manufacturing	101	3,349	9	\$52,866
NAICS 56: Administrative and waste services	118	2,437	7	\$30,599
NAICS 23: Construction	285	1,995	5	\$38,883
NAICS 42: Wholesale trade	135	1,814	5	\$48,000
NAICS 52: Finance and insurance	189	1,744	5	\$51,150
NAICS 81: Other services, except public administration	334	1,607	4	\$26,454
NAICS 54: Professional and technical services	217	1,338	4	\$40,873
NAICS 21: Mining, quarrying, and oil and gas extraction	75	1,027	3	\$67,448
NAICS 48-49: Transportation and warehousing	74	808	2	\$46,983
NAICS 53: Real estate and rental and leasing	121	526	1	\$27,761
NAICS 71: Arts, entertainment, and recreation	35	518	1	\$16,380
NAICS 11: Agriculture, forestry, fishing and hunting	103	352	1	\$27,326
NAICS 61: Educational services	16	340	1	\$24,632
NAICS 22: Utilities	11	230	1	\$67,267
NAICS 55: Management of companies and enterprises	9	85	0	\$59,325
Source: US Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages, April 1, 2015: http://www.bls.gov/cew/				

³ The largest location quotient for employment in Tom Green County was 3.7 for NAICS sector 21, indicating that employment in the oil and gas sector was about 4 times more concentrated than the nationwide level.

DEMOGRAPHICS

The Census Bureau's most recent estimate of the Tom Green County resident population is 116,608.⁴ In addition, the Texas State Demographer developed three population projections for the county based on varying assumptions about migration in years ahead. Figure 1 depicts the State's current projections for population growth in Tom Green County through 2025.



The highest growth projection (red line) is based on the assumption that the county is following the trend approximating one-half the migration that took place in and out of the area between the census counts of 2000 and 2010. This projection anticipates the county will reach 118,945 residents in 2025. The State Demographer's population projection picture for Tom Green County is somewhat more conservative than the growth levels implied by recent estimates of the population from the Census Bureau.

Vulnerable Populations

Tom Green County has a dwindling majority White, Non-Hispanic population as depicted in Table 2 below. The county's estimated 40,892 Hispanic residents comprised about 37 percent of the population in 2012 according to estimates of the State Demographer. Black citizens and

⁴ From US Census Bureau, Population Division, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2014, retrieved July 24, 2015: <http://factfinder.census.gov>.

other minorities added another 7,303 residents, bringing the total minority population to 43 percent.

Table 2								
Race & Ethnicity: 2012 Estimate with Projections to 2025								
Population Groups	2012		2017		2020		2025	
White, Non Hispanic	63,788	57%	62,648	55%	62,138	54%	61,290	52%
Total Minority	48,195	43%	51,452	45%	53,746	46%	57,655	48%
Hispanic	40,892	37%	43,802	38%	45,877	40%	49,444	42%
Black	4,051	4%	4,125	4%	4,165	4%	4,179	4%
Other	3,252	3%	3,525	3%	3,704	3%	4,032	3%
Total Population	111,983	100%	114,100	100%	115,884	100%	118,945	100%
Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: http://txsdc.utsa.edu/Data/TPEPP/Index.aspx . The forward projections for 2017, 2020, and 2025 reflect the State Demographer's highest growth assumption that migration will equal one-half the rate for the 2000-2010 time period.								

The State Demographer's projections indicate that Hispanic residents are likely to account for virtually all of the county's population increase in the near future. The expectation is for the Hispanic segment of the community to steadily grow from 37 to 42 percent between 2012 and 2025. The Non-Hispanic White population is projected to decrease proportionately.

Children under age 18 (numbering 26,646) made up 24 percent of the county's population in 2012 according to state estimates. Youngsters of school attendance age (5-17 years) comprised 71 percent of the children, while preschoolers accounted for 29 percent.

Table 3								
Children: 2012 Estimate with Projections to 2025								
Child Groups	2012		2017		2020		2025	
All Children (under age 18)	26,646	100%	27,939	100%	28,389	100%	28,895	100%
School-age children (ages 5-17)	18,817	71%	19,855	71%	20,398	72%	20,825	72%
Pre-school-age children (under 5)	7,829	29%	8,084	29%	7,991	28%	8,070	28%
Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: http://txsdc.utsa.edu/Data/TPEPP/Index.aspx . The forward projections for 2017, 2020, and 2025 reflect the State Demographer's highest growth assumption that migration will equal one-half the rate for the 2000-2010 time period.								

The child population is expected to increase more rapidly than the overall population, increasing from 26,646 in 2012 to nearly 29,000 by 2025.

The county was home to 16,141 senior citizens in 2012 according to state estimates. Elders comprised 14 percent of the total population. Hispanics (numbering 3,171) made up 20 percent of the senior residents in the county.

Table 4								
Seniors: 2012 Estimate with Projections to 2025								
Groups	2012		2017		2020		2025	
Total Population	111,983	100%	115,884	100%	115,884	100%	118,945	100%
Seniors (65 & over)	16,141	14%	18,088	16%	19,637	17%	22,086	19%
Hispanic Seniors (65 & over)	3,171	20%	3,986	22%	4,634	24%	5,877	27%
Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: http://txsdc.utsa.edu/Data/TPEPP/Index.aspx . The forward projections for 2017, 2020, and 2025 reflect the State Demographer's highest growth assumption that migration will equal one-half the rate for the 2000-2010 time period.								

Official State projections suggest brisk growth of the senior population to 19 percent by 2025. Elder residents are expected to climb from 16,141 to about 22,000 between 2012 and 2025.

There are 1.04 females in Tom Green County for every male. Women and girls comprised 51 percent of the population according to the State Demographer's 2012 population estimates. Projections indicate the female population will increase in number to more than 60,000 by 2025 and remain a 51 percent majority of the county's population.

Table 5								
Females: 2012 Estimate with Projections to 2025								
Groups	2012		2017		2020		2025	
Total Population	111,983	100%	114,100	100%	115,884	100%	118,945	100%
Female (all ages)	57,100	51%	57,954	51%	58,774	51%	60,125	51%
Female (ages 13-17)	3,379	6%	3,584	6%	3,706	6%	3,931	7%
Hispanic Female (ages 13-17)	1,599	47%	1,877	52%	1,969	53%	1,954	50%
Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: http://txsdc.utsa.edu/Data/TPEPP/Index.aspx . The forward projections for 2017, 2020, and 2025 reflect the State Demographer's highest growth assumption that migration will equal one-half the rate for the 2000-2010 time period.								

Girls age 13-17 are particularly vulnerable to risks of teen pregnancy, single parenthood, poverty, and a range of associated factors. Girls in this age range are also projected to make up six to seven percent of the population in this age group with Hispanic teens comprising the majority.

COMMUNITY HEALTH RESOURCES

As previously noted, 62 health and social assistance establishments in Tom Green County employed 21 percent of private industry workers in 2013. Health and social assistance workers are the county's largest sector of private industry employees. They form the backbone of a regional health care hub serving the Concho Valley area of West Texas.

Acute Care Hospital Utilization, Revenue, and Charges

San Angelo Community Medical Center and Shannon Medical Center are trauma level 3 acute care hospitals located in Tom Green County. Together, these two medical centers serve the Concho Valley population and are foundational pillars of the regional health care system.

Each of these regional hospitals earned high ratings in the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. The survey collected responses from more than 300 patients discharged from each hospital. Large majorities of patients reported positive experiences of the hospital environments and communications by doctors, nurses, and staff members with patients. The survey was conducted in partnership with Centers for Medicare & Medicaid Services between October 2013 and September 2014.⁵

The regional significance of the Tom Green County hospitals is reflected in the nearly 17,000 admissions reported by the two facilities in 2012. This accounts for about 78 percent of the total admissions reported by the combined 13 hospitals within the study region. It also equates to an average daily census of 215.3 in the county's two acute care hospitals. This is nearly 11 times greater than the census of 20.1 patients per day in the 13 study region hospitals during 2012.

The staffed occupancy rate for the two Tom Green County regional hospitals indicates 52.1 percent of the staff bed capacity was used in 2012. This compares to a 40.6 percent for the 13 hospitals across the region and 58.3 percent for acute care hospitals statewide.

The importance of the regional hospitals for serving the regional population, including its most vulnerable members, is highlighted by the 2012 published data on revenues and charges. The \$1.3 billion of gross patient revenue generated by the two Tom Green County hospitals represents 85 percent of gross revenues for the 13 hospitals in the study region during 2012.

⁵ HCAHPS items cover topics such as doctor and nurse communication, hospital cleanliness and noise levels, medication and post-discharge care instructions, and overall patient ratings. Data retrieved July 31, 2015: <https://data.medicare.gov/>.

Table 6				
2012 Hospital Utilization, Revenue and Charges				
Hospital(s)	San Angelo Community	Shannon	Tom Green County	Region
Utilization Measures				
Staff Beds	131	282	413	643
Admissions	5,239	11,684	16,923	21,832
Inpatient Days	22,321	56,461	78,782	95,593
Medicare Inpatient Days	58.6%	59.5%	59.3%	59.6%
Medicaid Inpatient Days	13.1%	12.5%	12.7%	12.9%
Average Daily Census	61	154.3	215.3	20.1
Average Length Stay	4.3	4.8	4.7	4.5
Staffed Occupancy Rate	46.6%	54.7%	52.1%	40.6%
Revenue & Charges				
Total Uncompensated Care	\$22,388,523	\$89,896,326	\$112,284,849	\$130,254,618
Bad Debt Charges	\$20,920,224	\$30,610,663	\$51,530,887	\$67,864,830
Charity Charges	\$1,468,299	\$59,285,663	\$60,753,962	\$62,389,788
Net Patient Revenue	\$88,714,563	\$207,164,235	\$295,878,798	\$401,687,575
Total Gross Patient Revenue	\$522,161,436	\$728,766,324	\$1,250,927,760	\$1,474,374,831
Gross Inpatient Revenue	\$244,858,006	\$358,559,769	\$603,417,775	\$664,983,937
Gross Outpatient Revenue	\$277,303,430	\$370,206,555	\$647,509,985	\$809,390,894
Percent of Gross Patient Revenue in Uncompensated Care	4.3%	12.3%	9.0%	8.8%
Population Measures				
Population Estimate	111,983	111,983	111,983	237,912
Staff Beds per 1,000 Population	1.2	2.5	3.7	2.7
Admissions per 1,000 Population	46.8	104.3	151.1	91.8
Inpatient Days per 1,000 Population	199.3	504.2	703.5	401.8
Per Capita Gross Patient Revenue	\$4,663	\$6,508	\$11,171	\$6,197
Per Capita Uncompensated Care	\$200	\$803	\$1,003	\$547
Source: Texas Department of State Health Services, Annual Survey of Hospitals, retrieved May 12, 2015: http://www.dshs.state.tx.us/chs/hosp/ .				

At the same time, services of the two hospitals accounted for 86 percent of uncompensated care and 97 percent of charity charges in the region. Uncompensated care charges at one of the two hospitals, Shannon Medical Center, amounted to 12.3 percent of their gross patient revenue in 2012, including 8.1 percent of gross revenue in charity care alone. By comparison, statewide charity charges were 6.5 percent and uncompensated care was 10.7 percent of gross patient revenues across Texas acute care hospitals.

These levels of uncompensated care and charity charges at Shannon Medical Center abated after 2012. Between July 2013 and June 2014, Shannon's charity charges fell to \$44.4 million and uncompensated care declined to \$64.5 million. At these levels, charity charges and uncompensated care accounted for 7.7 percent and 11.2 percent, respectively, of gross revenue. During the same period, there was little change in the ratios of charity charges and uncompensated care at Community Medical Center.⁶

Hospital inpatient and outpatient discharge data give additional evidence of the regional status of Tom Green County's facilities. There were more than 19,000 inpatient discharges from the county's hospital facilities during 2013 according to Texas Department of State Health Services records. Of these, 73 percent were patients residing in Tom Green County; another 13 percent were from counties in the study region; and 14 percent were from beyond the study region, including some out-of-state patients.

Discharge records also indicate more than 101,000 visits to Tom Green County outpatient facilities for 2013. Nearly 78 percent of these were outpatients from the county; an additional 17 percent were from counties in the study region; and about five percent resided in other Texas counties. Less than one percent of outpatient discharges were out-of-state residents.⁷

Acute Care Hospital Quality of Care

Hospital Compare is part of the Centers for Medicare & Medicaid Services (CMS) Hospital Quality Initiative. The Initiative uses a variety of tools to encourage and support improvements in the quality of care delivered by hospitals by distributing objective, easy to understand data from consumer perspectives. The data are risk-adjusted to reflect characteristics of hospitals and patients. Thus, hospitals are compared to like-hospitals of similar size and patient mix. The Hospital Compare website includes data on more than 4,000 Medicare-certified hospitals across the country.⁸

Health care associated infections are sometimes contracted by patients during the course of their medical treatment. Rates for six serious infections were collected for the Hospital Quality Initiative between October 2013 and September 2014. The infections can often be prevented when health care facilities follow guidelines for safe care.

⁶ Data retrieved from Texas PricePoint, August 2, 2015: <http://www.txpricepoint.org/>.

⁷ Texas Department of State Health Services, Inpatient and Outpatient Public Use Data Files, 2013.

⁸ Hospital Compare is available online at <https://www.medicare.gov/hospitalcompare>.

Table 7 Healthcare Associated Infections Compared to National Benchmarks		
Type of Infection	San Angelo Community	Shannon
Blood stream infections	No Different	No Different
Catheter-Associated Urinary Tract Infection	No Different	No Different
Colon Surgical Site Infection from colon surgery	Not Available	No Different
Hysterectomy Surgical Site Infection	No Different	Not Available
MRSA infections	No Different	No Different
Intestinal infections	Better	Better
Source: Hospital Compare Data, Centers for Medicare & Medicaid Services, retrieved August 7, 2015: https://data.medicare.gov/ .		

The health care associated infections data includes all patients treated in acute care hospitals including adult, pediatric, neonatal, Medicare, and non-Medicare patients. The data are risk-adjusted to reflect characteristics of hospitals and patients. Therefore, the comparison evaluates like-hospitals of similar size and patient mix.

Rates for five out of the six health care associated infections included in the Hospital Quality Initiative are “no different” at Tom Green County’s two acute care hospitals compared to similar hospitals around the nation. Both hospitals, San Angelo Community and Shannon, have “Better” rates than similar hospitals for intestinal infections (*C. difficile*).

The Hospital Quality Initiative also collected data focused on discharged patients who were hospitalized again within 30 days. The data covers unplanned readmission for heart attack (AMI), coronary artery bypass graft (CABG), chronic obstructive pulmonary disease (COPD), stroke, heart failure, hip/knee replacement, and pneumonia. The hospital-wide readmission measure included all medical, surgical, gynecological, neurological, cardiovascular, and cardiorespiratory patients.

Table 8 Hospital Readmissions Compared to National Benchmarks		
Type of Readmission	San Angelo Community	Shannon
Heart attack (AMI)	No Different	No Different
CABG	No Different	No Different
COPD	No Different	No Different
Stroke patient	No Different	No Different
Heart failure	No Different	Better
Hip/knee replacement surgery	No Different	No Different
Pneumonia	No Different	No Different
Hospital-wide	No Different	Better
Source: Hospital Compare Data, Centers for Medicare & Medicaid Services, retrieved August 7, 2015: https://data.medicare.gov/ .		

Based on data collected between July 2011 and June 2014, Tom Green County's regional acute care hospitals are generally 'No Different' on readmissions compared to similar hospitals nationwide. Shannon Medical Center, however, achieved a "Better" outcome compared to national benchmarks on heart failure readmission and the hospital-wide readmission rate.

Hospital Quality Initiative mortality data reports deaths within 30-days of a hospital admission from heart attack, CABG, COPD, heart failure, pneumonia, and stroke. The data were collected between July 2011 and June 2014.

Table 9 Hospital Deaths Compared to National Benchmarks		
Hospital Deaths	San Angelo Community	Shannon
Heart Attack (AMI) Mortality Rate	No Different	No Different
Death rate for CABG	Worse	No Different
Death rate for COPD	No Different	No Different
Heart failure mortality rate	No Different	No Different
Pneumonia mortality rate	No Different	Better
Death rate for stroke patients	No Different	No Different
Source: Hospital Compare Data, Centers for Medicare & Medicaid Services, retrieved August 7, 2015: https://data.medicare.gov/ .		

Death rates in the regional hospitals in Tom Green County were in line with comparable hospitals nationwide, with two exceptions. The death rate from coronary artery bypass graft at San Angelo Community Medical Center was higher (Worse) than comparable hospitals. Shannon Medical Center had a lower (Better) death rate among pneumonia patients compared to the national benchmark.

The Hospital Quality Initiative measures of effective care report the percentage of hospital patients receiving the treatments recommended for best results with certain medical conditions or surgical procedures. These include conditions like heart attack, heart failure, pneumonia, children's asthma, stroke, influenza, and blood clots, as well as best practices to prevent surgical complications. Additional measures focus on timely treatment of patients who come to a hospital with medical emergencies.

Tom Green County's regional acute care hospitals show impressive levels of adherence to effective care recommendations. The two hospitals reported a total of 59 data sets related to effective care recommendations between October 2013 and September 2014. Analysis of the data by the Hospital Quality Initiative revealed a 97.2 percent rate of adherence to recommended care standards.

Table 10						
Timely and Effective Care						
Measures	San Angelo Community		Shannon		Both Hospitals	
In-Patient Care	Measures	Adherence	Measures	Adherence	Measures	Adherence
Adherence to Effective Care Recommendations	28	99.1%	31	95.5%	59	97.2%
Emergency Wait Times	Minutes	Statewide	Minutes	Statewide	Minutes	Statewide
Average time before going home	137	147	124	155	131	151
Median time to get pain medication for patients with broken bones	57	54	52	54	54	54
Median time from arrival to admission	242	267	247	285	245	277
Average time from admit decision to admission	84	94	84	114	84	105
Source: Hospital Compare Data, Centers for Medicare & Medicaid Services, retrieved August 7, 2015: https://data.medicare.gov/ .						

The emergency departments of the hospitals also score positively on timely delivery of emergency care services when compared statewide to emergency rooms of similar patient volume. For instance, outpatients in Tom Green County emergency rooms average 20 fewer minutes before returning home than outpatients across Texas going to emergency rooms with similar patient traffic. Patients who go to the county's emergency rooms with conditions that result in hospitalization also spend less time in the process.

Other Health Care Resources

The Department of State Health Services counts 285 Emergency Medical Service (EMS) professionals in Tom Green County for 2014. This yields a population ratio of 395 residents per EMS specialist. This compares to 295 residents per specialist in the 20-county study area and 438 for Texas overall.

The San Angelo Fire Department is the EMS provider for Tom Green County. SAFD reports 165 EMS professionals on staff, all trained and certified to the paramedic level. This computes to one paramedic per 682 residents of the county. With 12 ambulance vehicles, the paramedic professionals respond to more than 10,000 (more than 61 per paramedic) ambulance calls per year according to SAFD.⁹ The EMS service is supported in part by the Tom Green County Emergency Services District, one of 294 special taxing authorities for Emergency Medical Services in Texas as of 2013.

The EMS District had a small tax rate for 2013 of 0.02799 cents per \$100 valuation on properties valued at \$309,288,320. The tax levy generated \$86,570 in revenue which was entirely committed to maintenance and operations of the service according to the records of the Texas Comptroller.¹⁰

Table 11 depicts the supply of EMS and other of key health professionals in Tom Green County according to the Department of State Health Services data for 2014. Overall, the data confirm the county's status in providing regional health services. The more than 4,000 licensed or certified health professionals residing in the county account for 55 percent of the total supply of professionals in the 20-county study region.

⁹ SAFD data is from the City of San Angelo, retrieved August 11, 2015: <http://www.cosatx.us/departments-services/fire-department>.

¹⁰ See "Special District Rates and Levies," 2013, Texas Comptroller of Public Accounts, retrieved May 2, 2015: <http://www.window.state.tx.us/taxinfo/proptax/taxrates/>. Out of the 294 Texas special districts levying taxes for EMS in 2013, 288 districts yielded a higher levy than the Tom Green District.

Table 11 Selected Health Professionals by Geography, 2014						
Licensed or Certified Professionals	Number in Tom Green County (112,465 Population)	Ratio of Population per Professional	Number in 20 County Study Region (239,529 Population)	Ratio of Population per Professional	Number in Texas (26,581,256 Population)	Ratio of Population per Professional
Certified Nurse Aides	696	162	1,879	127	124,616	213
Dentists	47	2,393	70	3,422	12,767	2,082
Dieticians	25	4,499	33	7,258	4,668	5,694
Emergency Medical Services	285	395	812	295	60,690	438
Licensed Chemical Dependency Counselors	74	1,520	87	2,753	9,285	2,863
Licensed Professional Counselors	118	953	158	1,516	20,655	1,287
Licensed Vocational Nurses	643	175	1,197	200	77,624	342
Marriage and Family Therapists	7	16,066	12	19,961	3,149	8,441
Medication Aides	59	1,906	139	1,723	10,012	2,655
Occupational Therapists	35	3,213	45	5,323	7,914	3,359
Optometrists	13	8,651	18	13,307	3,272	8,124
Pharmacists	91	1,236	146	1,641	23,561	1,128
Physical Therapists	70	1,607	109	2,198	13,136	2,024
Physician Assistants	23	4,890	51	4,697	6,543	4,063
Physicians (Direct Patient Care)	283	397	357	671	47,289	562
Primary Care Physicians	112	1,004	168	1,426	19,277	1,379
Psychiatrists	11	10,224	12	19,961	1,971	13,486
Promotores (Community Health Workers)	1	112,465	15	15,969	2,032	13,081
Psychologists (All)	38	2,960	43	5,570	7,382	3,601
Registered Nurses	1,207	93	1,696	141	206,027	129
Advanced Practice (APRN)	94	1,196	119	2,013	15,194	1,749
Social Workers	79	1,424	117	2,047	19,536	1,361
Total Selected Health Professionals	4,011	28	7,283	33	696,600	38
Source: Texas Department of State Health Services, Supply and Distribution Tables for State-Licensed Health Professions in Texas, retrieved May 26, 2015: http://www.dshs.state.tx.us/chs/hprc/health.shtm .						

Based on population ratios, the county is the regional center for most key health professionals. It is reasonably supplied compared to the study region with advanced professionals such as direct-care physicians, dentists, registered nurses, pharmacists, physical therapists, psychiatrists, and psychologists. Its ratio of professionals to population falls below the regional ratio for physician assistants and community health workers.

Tom Green County's two post-secondary institutions provide the region with a robust set of opportunities for professional education. Students can pursue two-year Associate degrees in pre-medicine, social work, child and family development, dental hygiene, nursing, radiologic technology, and respiratory care through the San Angelo Campus of Howard College. Howard College also offers certification programs for child care, dental laboratory technology, medical assistants, paramedics, surgical technology, and vocational nursing.

Angelo State University offers pre-professional programs to undergraduates in chiropractic, dentistry, medicine, occupational therapy, optometry, pharmacy, physical therapy, physician's assistant, podiatry, and veterinary medicine. The university offers undergraduate programs in food animal science and marketing, athletic training, exercise science, nursing, psychology, and social work.

Angelo State University's graduate programs educate professionals in recreation and fitness administration, counseling psychology, and industrial-organizational psychology. The graduate nursing programs include advanced practice certification options for family nurse practitioners and nurse educators. The university also offers a Doctor of Physical Therapy degree program.

During the fall of 2015, the university received authorization to construct a new building on campus. The university's College of Health and Human Services also changed its name to the Archer College of Health and Human Services.¹¹ The College includes departments and programs in kinesiology, nursing, physical therapy, psychology, sociology and social work, as well as the Center for Community Wellness, Engagement, and Development.

La Esperanza, which operates health and dental centers, is a Federally Qualified Health Center providing a full range of ambulatory care services to underserved and uninsured residents of Tom Green County and the region. The organization serves about 9,000 patients at two service delivery locations in San Angelo. La Esperanza provides services in behavioral health, chemical dependency, community integration, developmental disabilities, eating disorders, family practice, family planning, general practice, gynecology, HIV testing, health education, hearing screening, immunizations, Medicaid/CHIP eligibility and enrollment assistance, nutrition education and counseling, obstetrics, pediatric medicine, preventive dental care, and translation and interpretation. The Centers met the 2015 National Patient Safety Goals of the Joint Commission.¹²

Baptist Retirement Community is a privately owned non-profit community offering continuing care retirement services for seniors of the region. It offers independent living, skilled or long-term nursing, memory care, home health, hospice, and outpatient therapy. Residents have access to on-site resources such as a pharmacy, health clinic, and fitness centers.

The Baptist Retirement Community includes two residential nursing home facilities. One is a continuing care retirement facility offering a tiered approach to aging needs ranging from assisted living to skilled nursing. Nursing Home Compare has a 4-star rating for the facility indicating it is better than 60-80 percent of Texas nursing homes.¹³ The facility has 108 certified beds and 80 residents according to 2015 data.¹⁴

¹¹ See "ASU program gets \$5 million boost," *San Angelo Standard-Times*, October 9, 2015: A1.

¹² The Joint Commission Quality Check, retrieved August 19, 2015: <http://www.qualitycheck.org/consumer/searchQCR.aspx>.

¹³ Nursing Home Compare is available online at <https://www.medicare.gov/nursinghomecompare/search.html>.

¹⁴ Nursing Home Compare Data, Centers for Medicare and Medicaid Services, retrieved August 16, 2015: <https://data.medicare.gov/>.

The second Baptist Retirement Community nursing home is specialized in care for seniors with memory-related impairments, such as Alzheimer's or dementia. It is a 72-bed certified facility with 68 residents. Its 5-star rating places the facility in the top 20 percent of Texas nursing homes based on 2015 data.¹⁵ Baptist Retirement Community is engaged in expansion to enhance its continuum of care capacity for individuals with memory impairment.¹⁶

San Angelo has a total of nine nursing homes, including the two owned and operated by Baptist Retirement Community. The additional seven nursing homes bring the total certified bed total in Tom Green County to 950. Data for 2015 indicated 658 total residents in the nine nursing homes, yielding an occupancy rate of 69 percent. This compares to an occupancy rate of 71 percent for 1,220 Texas nursing homes included in the 2015 data.

The average overall star rating for the nine Tom Green County nursing homes is 2.9, surpassing the average of 2.7 for nursing homes across Texas. However, Tom Green County's nursing homes fell below the statewide average star rating on quality. The Texas average quality rating based on 2015 Nursing Home Compare data was 3.1 on the 5-point rating scale. Comparatively, the Tom Green County average was 2.2.¹⁷

There are also eight home health service providers with offices based in San Angelo and Tom Green County.¹⁸ These agencies offer nursing care, hospice care, physical therapy, occupational therapy, speech pathology, medical social services, and home health aide services. The average 5-point star quality rating for San Angelo based services is 2.8 according to data for 2015. This compares to a statewide average of 2.9 for the 1,695 Texas agencies rated in the 2015 Home Health Compare Data.¹⁹ Both the local and state quality ratings are near the national average range (3.0-3.5 on the 5-point scale) of quality performance.

West Texas Rehabilitation Center is another regional health resource in Tom Green County. This private, non-profit corporation was founded in 1953 as a treatment center for children with cerebral palsy. The Center has locations in Abilene, Ozona, and San Angelo providing outpatient

¹⁵ *Ibid.*

¹⁶ See Baptist Retirement Community, Coming Soon – Fall 2015 – Memory Care Assisted Living, retrieved August 21, 2015: <http://www.baptistretirement.org/>.

¹⁷ The local average rating for quality of care was lower than the state average primarily because four of the nine local nursing homes were rated in the lowest 20 percent of nursing homes statewide. Nursing Home Compare Data, *op. cit.*, retrieved August 16, 2015: <https://data.medicare.gov/>.

¹⁸ These are services with home offices located in the city and county, not the number of home health agencies offering services in the area. Fifteen agencies certified by the Centers for Medicare and Medicaid Services are offering home health services in Tom Green County. See Home Health Compare at <https://www.medicare.gov/homehealthcompare/search.html>.

¹⁹ Home Health Compare Data, Centers for Medicare and Medicaid Services, retrieved August 13, 2015: <https://data.medicare.gov/>.

rehabilitation services to children and adults who are challenged by disabilities and disorders. The San Angelo location provides hearing, family support, occupational therapy, orthotic, pediatric, physical therapy, prosthetic, and speech and language pathology services.

Cook Children's Pediatric Specialties clinic is a new addition to San Angelo's regional health care services. Based in Fort Worth, the San Angelo clinic is an addition to Cook Children's Health Care System's network of 60 medical and pediatric specialty clinic offices in Texas. The San Angelo facility opened in August 2015.

The facility connects a team of nine pediatric specialty physicians and three pediatric nurse practitioners to San Angelo patients via telemedicine. Specialty services include cardiology, endocrinology and diabetes, gastroenterology and nutrition, genetics, hematology and oncology, nephrology, dialysis, and neurology.²⁰

Behavioral Health Resources

As noted previously, Tom Green County serves as a regional anchor for many key health professionals. This is especially true of behavioral health professionals. As depicted in Table 11 above, the county is home to 92 percent of the psychiatrists in the 20-county study area, as well as 88 percent of the psychologists, 75 percent of licensed professional counselors, 68 percent of social workers, 58 percent of marriage and family counselors, and 85 percent of licensed chemical dependency counselors.

San Angelo's River Crest Hospital provides inpatient psychiatric, behavioral health, and chemical dependency services to Tom Green County and the region. Privately owned, the 80 bed facility serves children and adults in a continuum of care including evaluation, crisis stabilization, treatment, education, prevention, and aftercare. The Joint Commission rates the hospital's performance above the national average on patient safety and quality improvement goals based on data collected between January and December 2014.²¹

San Angelo is also home to MHMR Services for the Concho Valley. Established in 1966, MHMR Services is the mental health and intellectual and developmental disability authority for Coke, Concho, Crocket, Irion, Reagan, Tom Green, and Sterling counties. Their mission is to offer services for people with mental illness, intellectual and developmental disabilities, and autism

²⁰ Information about Cook's 60 medical and pediatric specialty offices is available at <http://www.cookchildrens.org/FindCare/locations/specialtyclinics/Pages/default.aspx>. Also see "Clinic shows off expansion," *San Angelo Standard-Times*, September 26, 2015: 4A.

²¹ The Joint Commission Quality Check, retrieved August 19, 2015: <http://www.qualitycheck.org/consumer/searchQCR.aspx>.

to enable lives of dignity and increased independence. Mental health services include a crisis hotline; crisis intervention; mental health screening and assessment; individual, family, and group therapeutic counseling; short-term respite; pharmacological management, medication training, and support; psychosocial rehabilitative services; life skills training and development; mobile rural assertive community treatment; and employment and housing assistance. Special inpatient and school-based services are provided for children.²²

In addition, Tom Green County has 19 intermediate care facilities for individuals with an intellectual disability. One is San Angelo's State Supported Living Center. The Center is certified for maximum occupancy of 233 individuals and has an occupancy rate of 92 percent based on data for October 2015.

The additional 18 facilities are privately owned locations in San Angelo. Together, the maximum occupancy for these facilities is 111 individuals, and the occupancy rate was 91 percent in October 2015.²³

San Angelo is also home to the Alcohol and Drug Abuse Council of the Concho Valley. The Council is licensed by the Texas Department of State Health Services to provide outpatient, residential detoxification, and intensive and supportive residential substance abuse treatment for adult men and women, including pregnant women and women with children. The Council also provides prevention; school, workplace, and community education; intervention services; screening and assessment; and direct assistance or referral programs to members of the community. The Alcohol and Drug Abuse Council is currently conducting a capital development campaign to implement a plan to construct a new residential treatment facility to double current capacity to 30 male treatment beds and 18 female treatment beds, and to add capacity for residential detoxification services to 12 clients.²⁴

West Texas Counseling and Guidance is another unique regional resource for behavioral health. The objective of the organization is to help individuals learn to heal themselves in mind, body, and spirit. West Texas Counseling and Guidance is a non-profit center working to ensure access to therapeutic counseling services for individuals and families regardless of ability to pay.

West Texas Counseling and Guidance provides counseling therapy services for depression and anxiety, addictions and substance abuse, anger management, trauma victims, grief, marriage

²² Information about MHMR Services for the Concho Valley is available online, retrieved August 19, 2015: <http://www.mhmrcv.org/>.

²³ Texas Department of Aging and Disability Services, retrieved October 5, 2015: <http://www.dads.state.tx.us/providers/ICF/index.cfm>.

²⁴ For information on the Alcohol and Drug Abuse Council of the Concho Valley, see: <http://adaccv.org/>.

and intimate relationships, autism, traumatic brain injury, developmental disabilities, and neurological impairments. The center's outreach programs take services to clients at local churches, schools, and service agencies, as well as to regional sites in Brady (McCulloch County), Eden (Concho County), Menard (Menard County), Ozona (Crockett County), and Sonora (Sutton County).²⁵

²⁵ Information about West Texas Counseling and Guidance is online at: <http://sanangelocounseling.org/>.

HEALTH STATUS

Family and Maternal Health

The Census Bureau's 2009-2013 5-Year American Community Survey estimated an average of 28,040 resident families residing in Tom Green County over that time. Basic indicators of family and maternal health in the county indicate a number of noteworthy risks.

Our calculations indicated that about 3,894 (13.9%) of families were single-parent (mostly female-parent) families with one or more children. This is in line with the 20-county study region (13.1%) and somewhat lower than the statewide percentage (15.6%). The ratio of divorces to marriages is also somewhat lower in Tom Green County compared to the study region and the state.

Table 12 Tom Green County Family and Maternal Health Indicators*				
Indicator	Tom Green County	Study Region	Region 9	Texas
Divorce Rate (Annual Divorces as a Percent of Annual Marriages)	38.2	43.2	No Data	45.0
Percent Women Age 15 & Over who are Currently Divorced	13.6	12.4	No Data	12.2
Single-Parent Families (Percent of All Families)	13.9	13.1	No Data	15.6
Teen Pregnancy Rate (Pregnancies per 1,000 Females Age 13-17)	24.1	25.3	30.5	21.4
Teen Birth Rate (Births to Mothers Age 13-17 per 1,000 Same Age Females)	22.1	23.1	28.1	18.4
Abortion Rate (Abortions as a Percent of Pregnancies among Females Age 15-44)	11.4	9.8	9.0	15.6
Percent Births to Unmarried Mothers (Female Population Age 15-44)	46.2	44.6	45.9	42.3
Child Abuse Rate* (Confirmed Incidents of Abuse per 1,000 Children)	17.7	12.9	13.8	9.5
Intimate Violence Rate (Incidents of Family Violence & Sexual Assault per 1,000 Population)	14.0	9.4	No Data	8.0
<p>* All ratios and percents, except the Child Abuse Rate, cover 2008-2012. The Child Abuse Rate is for 2010-2014. Sources: All calculations of rates and percents were performed by Community Development Initiatives at Angelo State University using data on Divorce, Teen Pregnancy, Teen Birth, and Abortion from Vital Statistics, Texas Department of State Health Services, retrieved June 9, 2015: http://www.dshs.state.tx.us/. The Child Abuse Rate was calculated using data from the Annual Data Books, Texas Department of Family and Protective Services, retrieved June 9, 2015: http://www.dfps.state.tx.us/. Estimates of Single-Parent Families and Percent Divorced Women were computed using data from the US Census Bureau, American Community Survey 2009-2013 5 Year Data, retrieved June 9, 2015: http://factfinder.census.gov/. Intimate Violence Rates were derived from data at Crime in Texas, Texas Department of Public Safety, retrieved June 9, 2010: http://www.txdps.state.tx.us.</p>				

Historically, the 30 counties in Public Health Region 9 of West Texas have seen higher numbers of teen pregnancies and births than the state. Tom Green County follows the trend with a teen birth rate of 22.1 per 1,000 females ages 13-17. The county's rate of abortion, 11.4 percent of

pregnancies among females ages 15-44, is slightly lower than the state overall, but higher than the study region.

Tom Green County's levels of child abuse and intimate violence are also distinctly high. The rate of child abuse for the five years 2010-2014 was much higher than the study region or the state at 17.7 victims per 1,000 children. The prevalence of family violence and sexual assault incidents in the county similarly outpaced the region and the state.

Potentially Preventable Hospitalizations

Hospitalizations that would likely not occur if the individual had accessed and cooperated with appropriate outpatient health care are termed potentially preventable hospitalizations. The State of Texas initiative to reduce potentially preventable hospitalizations works to improve health while diminishing the cost of health care.

Potentially Preventable Hospitalizations	Tom Green County			Study Region			Texas		
	Number	Average Charge	Per Capita Charge	Number	Average Charge	Per Capita Charge	Number	Average Charge	Per Capita Charge
Bacterial Pneumonia	2,091	\$29,066	\$716	3,572	\$20,816	\$437	280,079	\$36,925	\$530
Dehydration	557	\$18,008	\$118	936	\$3,222	\$30	91,238	\$21,706	\$101
Urinary Tract Infection	1,243	\$19,769	\$289	1,916	\$8,880	\$114	204,853	\$25,282	\$265
Angina (without procedures)	66	\$29,037	\$23	66	\$1,452	\$1	13,743	\$24,987	\$17
Congestive Heart Failure	1,793	\$33,708	\$712	3,580	\$22,942	\$421	326,337	\$41,191	\$689
Hypertension (High Blood Pressure)	305	\$20,540	\$74	463	\$1,927	\$8	65,973	\$25,365	\$85
Chronic Obstructive Pulmonary Disease or Older Adult Asthma	1,831	\$26,399	\$569	2,857	\$15,320	\$264	253,148	\$31,674	\$411
Diabetes Short-term Complications	344	\$21,691	\$88	466	\$2,952	\$11	63,954	\$26,913	\$88
Diabetes Long-term Complications	786	\$32,753	\$303	1,285	\$9,768	\$86	134,630	\$46,872	\$323
All Hospitalizations	9,016	\$27,234	\$2,892	15,141	\$21,483	\$1,371	1,433,955	\$34,178	\$2,512
Total Charges, 2008-2013		\$245,541,111			\$386,127,532			\$49,010,136,451	

Source: Potentially Preventable Hospitalizations, Center for Health Statistics, Texas Department of State Health Services, retrieved June 12, 2015: <http://www.dshs.state.tx.us/ph/>.

The Texas Department of State Health Services estimates that potentially preventable hospitalizations for ten identifiable health conditions generated \$49 billion in hospital charges between 2008 and 2013. Some \$386 million of these charges were incurred in the study region. Tom Green County's regional hospitals accounted for \$245.5 million or 64 percent of charges for the study area based on hospitalizations involving the conditions in Table 13.²⁶

²⁶ The Department of State Health Services recommends a combination of outpatient clinical and public health interventions to help reduce potentially preventable hospitalizations. See the recommended interventions at <http://www.dshs.state.tx.us/ph/interventions.shtm>.

Leading Causes of Death

The Department of State Health Services recorded 4,951 deaths from all causes among Tom Green County residents between 2008 and 2012. This computes to a five-year crude death rate of 44.2 deaths per 1,000 residents based on the 2012 population estimate. This is higher than the Texas rate of 32 per 1,000 over the same time frame, but it is lower than the rate of 45.6 per 1,000 for the study region.

Table 14 Leading Causes of Death in Tom Green County, 2008-2012				
Causes of Death	Deaths	Crude Death Rate*	Study Region Rate*	Texas Rate*
Malignant Neoplasms (ICD-10 Codes C00-C97)	1,010	9.019	9.617	7.023
Diseases of the Heart (ICD-10 Codes I00-I09, I11, I13, I20-I51)	869	7.760	9.541	7.350
Chronic Lower Respiratory Diseases (ICD-10 Codes J40-J47)	305	2.724	2.736	1.728
Cerebrovascular Diseases (ICD-10 Codes I60-I69)	238	2.125	2.324	1.772
Accidents (ICD-10 Codes V01-X59, Y85-Y86)	200	1.786	1.971	1.783
Diabetes Mellitus (ICD-10 Codes E10-E14)	169	1.509	1.538	0.958
Alzheimer's Disease (ICD-10 Code G30)	161	1.438	1.610	1.002
Influenza and Pneumonia (ICD-10 Codes J09-J18)	102	0.911	0.967	0.613
Nephritis, Nephrotic Syndrome and Nephrosis (ICD-10 Codes N00-N07, N17-N19, N25-N27)	92	0.822	0.971	0.691
Chronic Liver Disease and Cirrhosis (ICD-10 Codes K70, K73-K74)	80	0.714	0.803	0.562
Intentional Self-Harm (Suicide) (ICD-10 Codes X60-X84, Y87.0)	80	0.714	0.685	0.543
*All rates in the table express the number of deaths per 1,000 residents based on the estimated population for 2012. They are crude rates, not adjusted for age or other demographic characteristics. Source: Texas Department of State Health Services, retrieved June 23, 2015: http://www.dshs.state.tx.us/chs/datalist.shtm .				

Malignant neoplasms followed by diseases of the heart top the list of the ten leading causes of death in Tom Green County. The county generally has higher death rates than the state on the leading causes. However, Tom Green County has lower crude death rates than the study region for most leading causes.

It is noteworthy that two of the county's top ten leading causes of death, accidents and suicide, are major behavioral events. Most other leading causes in the county are chronic medical conditions that also involve significant behavioral components in the disease etiology.

SURVEY OF THE POOR AND EXTREMELY POOR IN WEST TEXAS

The Census Bureau's 2009-2013 5-Year American Community Survey data approximates that 20,548 residents of Coke, Concho, Irion, Runnels, Sterling, and Tom Green counties, the northern-most counties in the 20-county study region, are living below the federal poverty level. This computes to a poverty rate of 16.4 percent for these six northern counties combined. Moreover, the Census Bureau data indicates that some 8,216 or 40 percent of these residents are extremely poor, living with incomes less than half the poverty level.²⁷

Between April and September 2015, Angelo State University's Community Development Initiatives and 72 organizations collaborated to complete detailed interviews with poor and extremely poor residents of the 20 counties in the study region.²⁸ A total of 597 interviews were completed, including 331 with residents of the six northern counties in the study region: Coke, Concho, Irion, Runnels, Sterling, and Tom Green counties.²⁹ Respondents from these counties had self-reported household incomes below the applicable federal poverty level. Approximately 54.1 percent were extremely poor with incomes equal to or below half of the applicable poverty level. About 71 percent were females. Respondents ranged in age from 20 to 92 with an average age of 46.9 years. See Table 15 for a summary of sample characteristics.

A schedule of questions covering health, behavioral health, and dental health topics was developed for the interviews. The Behavioral Risk Factor Surveillance System (BRFSS) surveys, conducted with adults age 18 and over by state health departments in partnership with the Centers for Disease Control and Prevention (CDC), served as a model for questions. Indeed, the three-page questionnaire yielded 31 indicators which closely parallel similar items in the 2013 BRFSS results for Texas.³⁰

²⁷ The combined rates of poverty and extreme poverty for the six counties were computed by Angelo State University's Community Development Initiatives based on data from the US Census Bureau, American Community Survey, 2009-2013 5-Year Estimates, retrieved October 2, 2015: <http://factfinder.census.gov/>.

²⁸ Residents were defined as extremely poor for the purposes of the interviews if their self-reported household income was near 50 percent or less of the applicable federal poverty level for 2015. They were deemed to be poor if self-reported household income was near or below the applicable 2015 poverty level. Based on the results of the 2009-2013 five-year combined samples of the Census Bureau's American Community Survey, we estimated that approximately 14,743 extremely poor individuals reside in the 20-county study region. See the US Census Bureau's 2009-2013 5-Year American Community Survey at <http://factfinder.census.gov>.

²⁹ The number of interviews conducted in the respective counties was proportional to the estimated total of extremely poor population from the American Community Survey. Based on the American Community Survey, for instance, we estimated that 55.7% of extremely poor individuals in the study region resided in the northern counties of Coke, Concho, Irion, Runnels, Sterling, and Tom Green. Reflecting this, we conducted 331 or 55.4% of the interviews in these counties.

³⁰ BRFSS interviews are conducted by telephone. In contrast, the interviews for this project were conducted by trained community-based interviewers in a face-to-face informal format. Information on the Texas BRFSS is at <http://www.dshs.state.tx.us/chs/brfss/default.shtm>

Table 15		
Sample Characteristics*		
County of Residence		
Coke	5	1.5%
Concho	8	2.4%
Irion	3	0.9%
Runnels	37	11.2%
Sterling	3	0.9%
Tom Green	275	83.1%
Poverty Status		
Severly poor	179	54.1%
Poor	122	36.9%
Gender		
Male	95	28.7%
Female	236	71.3%
Ethnicity		
Not Hispanic	182	55.0%
Hispanic	149	45.0%
Age		
18-29	46	13.9%
30-39	65	19.6%
40-49	66	19.9%
50-64	124	37.5%
65 & Over	29	8.8%
Average Years of Age		46.9
Years of Schooling		
Less than 12	145	43.8%
12 or More	180	54.4%
Average Years of Schooling		10.9
Household Composition		
Single Person	42	12.7%
Single Parent	75	22.7%
Couples with Children**	72	21.8%
Couples without Children**	55	16.6%
Other***	87	26.3%
Average Household Size		2.7
<p>*The sample size in the north counties was 331. Some frequencies and percentages reported do not sum to 331 or 100% because of missing data for selected variables.</p> <p>**Couples may be married couples or unmarried partners.</p> <p>***Other households includes small numbers of respondents living with their parents, grandparents living with grandchildren, persons living with extended relatives, and persons living with roommates.</p>		

The results in Table 16 apply only to the northern counties (Coke, Concho, Irion, Runnels, Sterling, and Tom Green) of the study region. The table compares results from the Survey of the Poor and Extremely Poor to BRFSS estimates of health risk among the total adult populations of the north counties and the state overall. The first row of the table, for instance, reports that 179 individuals or 54.1 percent of the 331 survey participants from Coke, Concho, Irion, Runnels, Sterling, and Tom Green counties said they were limited by poor mental, physical, or emotional health conditions. Texas BRFSS results from a similar question asked in 2013 estimate that only 13.5 percent of all adult residents in the six counties share this risk of impairment.³¹

The 19 risk indicators in Table 16 were selected because the Survey of the Poor and Extremely Poor suggests that this vulnerable group has a level of risk on these factors that is at least 10 percent higher than the risk in the total adult population in the northern counties. Indeed, based on the comparisons to the BRFSS estimates, the vulnerable poor and extremely poor population experiences elevated risks that range from 11 percent higher (for being diagnosed with stroke) to 299 percent higher (for being limited by poor mental, physical, or emotional health conditions).

Other significant findings from the Survey of the Poor and Extremely Poor add context to some of the elevated risks indicated in Table 16. For instance, the 61 percent of northern county poor and extremely poor residents who reported not seeing a doctor because of cost indicates an elevated cost barrier to health care. Results from the survey expand on this by indicating that 53.5 percent of survey respondents lack health insurance. This compares to the Census Bureau's 2013 estimate that 27.3 percent of adults age 18-64 in Coke, Concho, Irion, Runnels, Sterling, and Tom Green counties are uninsured.³²

The survey findings also indicate that 91 percent of the poor and extremely poor do not have dental insurance; 81 percent do not have a regular dentist; 46.5 percent have not had a routine dental checkup within the past five years; and 48 percent never had dental cleaning or x-rays.

In addition to the apparent lack of access to preventative dental care, the survey shows other serious obstacles to preventative medicine among poor and extremely poor residents of the

³¹ The similar item in the BRFSS showing a 13.5% risk of impairment was based on a more formal question asking whether respondents were kept from normal activities for five or more days in the past 30 days by poor mental or physical health. Another comparative data point is available from the Census Bureau's American Community Survey. That data point indicates a 16% disability rate among adults residing in the six northern counties of the study region. The data is based on a set of direct questions to census survey respondents about having a range of physical and cognitive disabilities. See the American Community Survey, 2009-2013 5-Year, retrieved October 2, 2015: <http://factfinder.census.gov/>.

³² US Census Bureau, Small Area Health Insurance Estimates, retrieved September 29, 2015: <http://www.census.gov/did/www/sahie/>.

north counties. For instance, 19.4 percent of poor and extremely poor females reported never having a mammogram or Pap smear. Among men and women, 74.6 percent said they never had a colon/rectal exam; 13.6 percent never had a blood pressure check; 16.3 never had “blood work” done by a lab; 47.4 percent never had an HIV test; 31 percent never had vision screening; and 53 percent had never been screened for hearing.

Table 16					
Health Risks of the Poor and Extremely Poor in North Counties with BRFSS Comparisons					
Risk Indicators	Survey Results: North Counties*			BRFSS Risk Comparisons**	
	Sample	Population at Risk	Percent at Risk	North Counties	Texas
Limited by poor physical, mental, or emotional health conditions	331	179	54.1	13.5	11.6
Does not think of anyone as a personal doctor	331	162	48.9	29.8	33.1
Could not see a doctor because of cost during past 12 months	331	202	61.0	19.9	19.3
Five or more years since routine checkup by a doctor	331	42	12.7	9.8	10.5
Diagnosed high blood pressure: not taking meds	128	32	25.0	21.2	23.2
Diagnosed heart attack (myocardial infarction)	331	26	7.9	5.7	3.9
Diagnosed heart disease	331	30	9.1	7.4	5.7
Diagnosed stroke	331	15	4.5	4.1	2.5
Diagnosed asthma	331	79	23.9	15.8	12.6
Diagnosed COPD (incl. emphysema, chronic bronchitis)	331	50	15.1	5.2	5.4
Diagnosed arthritis, rheumatoid arthritis, gout, lupus, fibromyalgia	331	114	34.4	24.7	20.7
Diagnosed depression (major, chronic, minor)	331	158	47.7	15.1	16.0
Diagnosed kidney disease	331	21	6.3	2.2	3.1
Diagnosed diabetes	331	80	24.2	14.1	10.9
Morbidly Obese BMI => 35	331	69	20.8	11.3	12.7
Current smoker	331	142	42.9	18.8	15.9
Current smokeless tobacco user				8.2	4.3
Binge drinking	331	78	23.6	15.1	16.7
Difficult to access fresh fruits & vegetables	331	92	27.8	10.2	7.7
Second-hand smoke exposure in home	331	77	23.3	10.9	13.7
*These columns report the Survey of the Poor & Extremely Poor in West Texas combined results for Coke, Concho, Irion, Runnels, Sterling, and Tom Green counties.					
**These columns include results from the Texas BRFSS conducted by the Texas Department of State Health Services in 2013. The BRFSS estimates reported for the North Counties are risk-adjusted by Community Development Initiatives at Angelo State University to account for the specific demographic characteristics of Coke, Concho, Irion, Runnels, Sterling, and Tom Green counties.					

Still other survey findings shine additional light on the indication in Table 16 of a 216 percent higher risk of poor and extremely poor adults being diagnosed with depression. Sizeable proportions of survey respondents also reported always, often, or sometimes feeling a fulfilling life is impossible (58.3%); avoiding situations out of nervousness, fear, or anxiety (67.7%); and feeling alone and not having much in common with people (59.2%). Nearly 20 percent indicated they do not feel tied to a support group (family, church, etc.) that would help them if needed.

Table 16 indicates that 27.8 percent of the poor and extremely poor in the north counties have difficulty accessing grocery stores with fresh fruits and vegetables. This suggests a 173 percent higher level of food insecurity compared to the BRFSS estimate of 10.2 percent lacking such access in the overall adult population. Additional indications of food insecurity from the survey include respondents who reported receiving assistance from SNAP or WIC (58.3%) as well as using food charities (69.8%). The potentials of food insecurity leading to obesity³³ are also buttressed by the prevalence of feeling unsafe in the neighborhood (13.9%) and not knowing of a safe place to walk, run, or exercise (27.8%) in the neighborhood. One additional sign of insecure living conditions among the poor and extremely poor is that 37.2 percent reported having been homeless for at least one week during the past five years.

³³ Table 16 depicts only the elevated risk of “morbid obesity” (defined as having a BMI equal to or greater than 35) at 20.8% compared to the 11.3% level indicated for the adult population in the 2013 BRFSS. Using the standard definition of obesity as having a BMI equal to or greater than 30 raises the obesity rate to 43.5% among the poor and extremely poor of the north counties.

IDENTIFICATION AND PRIORITIZATION OF HEALTH NEEDS

Identification of Community Health Needs

The previous sections of this report summarize the findings relating to Tom Green County from primary and secondary data collected by community-based participants in a comprehensive project to assess the Health and Behavioral Health Needs of vulnerable populations in a 20-county region of West Texas. The following data provide a foundation for identifying pertinent community health needs in Tom Green County:

- **Demographic Trend Data:** Demographic projections of population growth in Tom Green County were reviewed. Growth trends for vulnerable population groups were included in the review.
- **Hospital Data:** Available data on utilization, revenue, charges, and quality of care at Tom Green County hospitals were analyzed.
- **Other Health Care Resources:** Data and information on the supply of health care professionals, community clinics, nursing homes, home health agencies, and mental health services were reviewed.
- **Family and Maternal Health:** Indicators of family composition, domestic abuse data, and maternal health were reviewed.
- **Potentially Preventable Hospitalizations:** Data on hospitalization of Tom Green County residents that might have been avoidable if individuals accessed and complied with relevant preventative and outpatient health care services were reviewed.
- **Leading Causes of Death:** Data on leading causes of death were used to identify specific diseases associated with higher death rates in Tom Green County compared to the state.
- **Survey of the Poor and Extremely Poor in West Texas:** Original survey data was reviewed in conjunction with Texas BRFSS data to identify elevated health and behavioral health risks among the poor and extremely poor population of Coke, Concho, Irion, Runnels, Sterling, and Tom Green counties.

It is important to assert the community-wide and regional focus of this study of the health needs of vulnerable populations in the 20-county study region of West Texas. With this perspective at the forefront, the needs assessment has made every effort to use data to identify needs of community-level importance which, in many instances, can only be addressed through cooperative, collective community action. Analysis of the data from the community level focus leads to the following summary list of identified needs for Tom Green County:

1. Needs of children and seniors.
Increase capacity to address health needs of growing numbers of children and seniors in the population.
2. Child Abuse, Domestic, and Intimate Violence.
Continue to develop and strengthen collaborative community efforts to prevent and reduce local levels of child abuse, domestic, and intimate violence.
3. Access to dental care.
Increase capacity and access to quality dental care, especially by poor and extremely poor residents and households.
4. Capacity and access to behavioral health services for vulnerable groups.
Increase capacity and access to quality behavioral health resources for:
 - Prevention and treatment of depression
 - Smoking and tobacco cessation
 - Prevention and treatment of alcohol and drug abuse
 - Prevention of suicide
5. Preventative actions.
Increase emphasis on preventative actions in screening, treatment, case management, and community outreach and education to reduce prevalence, preventable hospitalizations, and mortality from:
 - Cancer
 - Heart disease and cardiovascular disease
 - COPD
 - Complications arising from diabetes
 - Influenza and pneumonia
 - Urinary tract infections
6. Preventative outreach to the poor and extremely poor.
Increase community capacity to reach the poor, extremely poor, and other vulnerable groups with preventative actions to:
 - Reduce obesity
 - Reduce cost and other barriers to treatment
 - Improve case management and outreach
 - Provide education to promote healthy living and wellness
7. Food, housing, and neighborhood security.
Increase the security of poor and extremely poor individuals and households by:
 - Increasing access to nutritious foods
 - Increasing affordable housing in safe neighborhood environments
8. Investment in community health needs.

Develop collaborative community efforts to increase investment in local and regional community health needs. Consider development of health targeted taxing authorities (e.g. hospital districts), solutions for expanding quality coverage of the uninsured, coordinated funding and development of proposals or campaigns, coordinated organizational and agency strategic planning, and other collaborative capacity building approaches.

Prioritization of Community Health Needs

A prioritization instrument was used to facilitate a priority ranking of the identified health needs. Key informants and stakeholders reviewed the instrument at a series of community forums during October 2015. Invitations were sent to county judges and county officials, mayors and city officials, law enforcement officials, hospital/clinic administrators and key personnel, mental health leaders, dentists, health departments, church leaders, service organization leaders, school administrators and key personnel, chambers of commerce, and significant employers. Two events were held in San Angelo, one in Brady, and one in Del Rio.

Access to preview copies of the previous sections of this report, including the above list of identified needs, were subsequently distributed via e-mail to key informants and stakeholders interested in Tom Green County. The informants and stakeholders also received an e-mail invitation and link to respond to the online instrument. Key informants and stakeholders responded from November 13 to December 14, 2015.

The prioritization instrument provided an opportunity for key informants and stakeholders to rank the health needs identified by the study for Tom Green County. Respondents ranked the needs based the specified criteria. A total of 36 responses ranking the identified needs for Tom Green County were returned.

Respondents ranked the identified community health needs on four criteria. A score between 1 and 5 was assigned for each criterion. The four criteria were presented to respondents as follows:

- Prevalence: How many people are potentially affected by the issue, considering how it might change in the next 5 to 10 years?
 - 5 - More than 25% of the community (more than 1 in 4 people)
 - 4 - Between 15% and 25% of the community
 - 3 - Between 10% and 15% of the community
 - 2 - Between 5% and 10% of the community
 - 1 - Less than 5% of the community (less than 1 in 20 people)

- Significance: What are the consequences of not addressing this need?
 - 5 - Extremely High
 - 4 - High
 - 3 - Moderate
 - 2 - Low
 - 1 – Minimal Consequences

- Impact: What is the impact of the need on vulnerable populations?
 - 5 - Extremely High
 - 4 - High
 - 3 - Moderate
 - 2 - Low
 - 1 - Minimal Impact

- Feasibility: How likely is it that individuals and organizations in the community would take action to address this need?
 - 5 - Extremely High
 - 4 - High
 - 3 - Moderate
 - 2 - Low
 - 1 - Minimal

Table 17 reports the results of the prioritization of needs in Tom Green County. The needs are listed in the rank order reflected in the adjusted averages on the right side of the table. The adjusted averages emphasize the importance of needs that respondents viewed as the most feasible ones for the community take action upon.

Table 17 Prioritization of Tom Green County Community Health Needs						
Community Health Need	Respondents	Prevalence	Significance	Impact	Feasibility	Adjusted Average
Emphasize preventative actions (screening, treatment, case management, outreach & education) to reduce COPD	36	4.17	4.28	4.23	3.76	5.05
Develop & strengthen efforts to reduce potentially preventable hospitalizations (PPH) from Congestive Heart Failure	36	3.86	3.86	4.03	4.11	4.99
Increase capacity to address health needs of Children & Seniors	36	4.08	3.56	3.89	4.17	4.97
Emphasize preventative actions (screening, treatment, case management, outreach & education) to reduce Cancer	35	3.83	3.71	3.82	4.18	4.93
Develop & strengthen efforts to reduce potentially preventable hospitalizations (PPH) from Influenza & Pneumonia	36	4.06	4.19	3.83	3.75	4.89
Increase capacity to reach vulnerable groups with preventative actions to improve Case Management & Outreach	36	3.89	3.86	3.75	3.97	4.86
Increase capacity to reach vulnerable groups with preventative actions to promote Healthy Living & Wellness	36	4.08	4.17	4.14	3.47	4.83
Increase capacity to reach vulnerable groups with preventative actions to reduce Obesity	36	3.78	3.83	3.94	3.89	4.83
Develop & strengthen efforts to reduce potentially preventable hospitalizations (PPH) from Diabetes	36	3.89	3.94	4.06	3.67	4.81
Emphasize preventative actions (screening, treatment, case management, outreach & education) to reduce Heart & Vascular Diseases	36	4.06	4.03	3.39	3.83	4.78
Develop & strengthen efforts to reduce potentially preventable hospitalizations (PPH) from COPD	36	3.47	3.14	3.61	4.39	4.75
Increase capacity & access for vulnerable groups to quality behavioral health resources for prevention and treatment of Depression	36	3.89	2.75	3.83	4.25	4.74
Increase capacity to reach vulnerable groups with preventative actions to reduce Cost & Other Barriers to treatment	36	4.00	3.69	4.11	3.50	4.70
Develop & strengthen efforts to reduce potentially preventable hospitalizations (PPH) from UTI	36	3.97	4.03	3.31	3.61	4.63
Develop collaborative efforts to Invest in community health needs	36	3.56	3.80	3.67	3.74	4.63
Increase capacity & access to quality Dental Care	36	3.91	3.23	3.69	3.83	4.63
Emphasize preventative actions (screening, treatment, case management, outreach & education) to reduce Diabetes	36	3.31	3.83	3.56	3.64	4.49
Develop & strengthen efforts to prevent and reduce Domestic Violence, including child abuse and intimate partner violence	36	3.31	3.92	3.19	3.03	4.12
Increase capacity & access for vulnerable groups to quality behavioral health resources for prevention & treatment of Alcohol	36	2.81	3.31	3.11	3.36	3.99
Increase the Food Security of vulnerable populations by increasing access to nutritious foods	36	3.03	2.83	3.17	3.39	3.95
Increase capacity & access for vulnerable groups to quality behavioral health resources for prevention of Suicide	36	3.08	2.92	3.19	3.22	3.91
Increase the Residential Security of vulnerable populations by increasing affordable housing in safe neighborhood environments	36	3.03	3.17	3.06	2.83	3.73
Increase capacity & access for vulnerable groups to quality behavioral health resources for Smoking & Tobacco cessation	36	2.97	2.81	2.58	2.92	3.55

The adjusted average for each need is based on the separate average scores assigned by respondents for prevalence, significance, impact, and feasibility. To emphasize the practicality of community action, however, the average for feasibility is given double-weight according to the following formula:

$$\text{Adjusted Average} = [\text{prevalence score} + \text{significance score} + \text{impact score} + (\text{feasibility score} \times 2)] \div 4$$

Thus, the first row of Table 17 shows the average prevalence score was 4.17 on the five-point scale. The averages for significance, impact, and feasibility were 4.28, 4.23, and 3.76 respectively. Applying the formula yields an adjusted average of 5.05, making emphasis on

preventative actions to reduce COPD the highest ranking community need for Tom Green County.

Respondents prioritized additional needs for preventative action in the top 10. These include cancer (4th) and heart and vascular diseases (10th). Efforts to reduce potentially preventable hospitalizations appeared three times in the top 10 priorities, including hospitalizations from congestive heart failure (2nd), influenza and pneumonia (5th), and diabetes (9th).

Four of the top 10 priorities recognized the special needs of vulnerable populations. The third priority was to increase capacity for addressing health needs of the growing number of children and seniors in the population. The need for outreach and prevention to vulnerable groups for improved case management, to promote healthy living, and to reduce obesity also ranked in the top 10 highest priority community health needs for Tom Green County.